TV990 Multi-functional Tracker

User's Manual

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Chapter I Preface

I. General

TV990 represents the perfect combination of GSM and GPS technologies. This model, with precise dimensions and compact appearance, expresses the advanced workmanship in the GSM and GPS field and is the typical design combing communication products and GPS services.

As a professional security and positioning company, we will provide you with more and better products and services. Before use, please spend several minutes reading this user's manual in order to understand operation details and obtain better services.

II. Notices

1. Please read carefully this user's manual and always use correct operation methods to prevent any possible errors.
2. This user's manual is for reference only. If some contents and operation steps are inconsistent with those for the actual product, the latter will prevail.
3. The defaulted password of this product is 0000.

Chapter II About the Device

TV990, as a personal remote positioning device made up of GPS module and GSM/GPRS module, is compact in dimensions and has high accuracy. On the basis of GPS satellites and under dynamic conditions, it can provide you with accurate and correct location information. With such features, it can be used to protect and look for our old people and children. You can use it for safety purpose and other purposes, such as remote positioning to protect property safety and follow animals.

I. Components

1. Inbuilt GPS Module

2. Internet positioning service center, used to receive and send positioning information.

II. Product Features

- GPS individual or fleet positioning;
- GSM /GPRS modem supports two frequency bands, i.e. 900/1800（850/1900）MHz(options)
- High-sensitivity, new workmanship and the most advanced GPS chip;
- Can accurately position even if with weak signals;
- Can work effectively in limited space such as the remote and narrow places in a city;
- Low energy consumption;
- Fast signal capturing;
- Supports single positioning and continuous tracking;
- Supports alarming and remote monitoring;
- Supports the location information inquiry by SMS and Internet
- May monitor without disturbing the tracked person and realizes real-time tracking;
- Can position the holder by call or mobile phone SMS;
- In emergency, press the SOS button to have an accurate positioning.

III. Product Specifications

1. Technical Specifications

GSM module	GSM850/900/1800/1900
GPS chip	Latest Sirf3
GPS sensitivity	-159dBm
GPS center frequency	L1, 1575.42MHz
GPS positioning accuracy	5-25m
GSM positioning accuracy	100-500m
Speed accuracy	0.1 m/s
Time accuracy	Synchronous with GPS
Default data	WGS-84
Hot start	1s
Warm start	38s
Max. altitude	18000m
Max. speed	515m/s
Gravitational acceleration	＜4g

2. Others

Working temperature	-20---65℃
Humidity	5%---95%
Dimensions	90×53×21 mm
Voltage	800mAh battery
Power supply	DC5V
Standby time	>48h
Buttons	One SOS emergency button for emergency aid; Call 1, Call 2, Receive and Hang up buttons.

Chapter III Use Preparation

I. Accessories

1. Main unit
2. USB data cable
3. Charger

II. Charge the Battery

Before the use of the tracker, please charge the battery at least 4h via the USB charging cable. For the first charge, in order to bring the performance of the battery into full play, charge it above 12h.

Indicator of charging:

Green led will be light while charging.

You must turn on TV-990 when charge it. The TV-990 can’t be charged if it is turned off.

If the tracker power is too low, it will take a few minutes, then the green led will be light.

Turn On The Unit

Press the power switch which the right of the unit about 3s then can hear the voice of switch on. Usually, you can press this power button to confirm whether the state of unit is switch on or off.

1. Location Inquiry

(1) SMS Inquiry

Create 666 + password command (defaulted password as 0000) via mobile phone and send it to the student terminal mobile phone number; after successful sending, the guardian's mobile phone will receive a piece of word message. See the flow as follows:

For example: 6660000

By the same means, send the command 988 + password to the terminal, then the terminal will return one piece of website message. The guardian may inquire the location information of the ward attached with local map through this website message.

For example, 9880000

2. Setup of Center Number

Set the center number by means of SMS through mobile phone. After the setup is successful, then the mobile phone sending the SMS will receive the "config OK" response message from the terminal.

Command format: #710# center number # user password ##

For example: #710#134xxxxxxxx#0000##

Note: All alarming information thereafter including SOS, low power, electronic fence, etc will be returned to such number.

3. Bi-directional Call Function

Send the command in form of SMS through mobile phone to the terminal. After the setup is successful, after sending the SMS, the mobile phone will receive the config OK response message returned from the terminal.

Setup format: #711# Call 1# Call 2 # Call 3 # 0000##

For example:

#711# 13800000000# 13700000000 # 13600000000 # 0000##

Note: After the setup is successful, press the CALL 1 button, then the terminal will automatically dial the first phone number. Press the CALL 2 button, then the terminal will automatically dial the second phone number. In addition, the terminal may receive all calls by pressing the Receive button and end all calls by pressing the End button.

Remarks: The automatic receiving function of the terminal. For all calls, if the terminal does not choose to end or receive within 30s, they can be received automatically.

4. SOS Function

If a ward number (the number in 3 above) is set, when the ward encounters emergency and presses the SOS button, then the terminal will send alarming information to the center number.

5. Monitoring Function

The ward may send SMS 555 + password to the terminal of the ward; in such case, the ward terminal of the ward will automatically call back the mobile phone of the guardian and the guardian may listen to the sound of the surroundings within 10m around the ward.

SMS format: 5550000

Remarks: 0000 is the initial default password and the actual use s subject to the actual password.

6. Regular Upload Interval Setup

The defaulted factory upload interval of this device is 2 minutes for getting the point and 10 minutes for uploading one piece of positioning information. The user may change such parameter according to actual demand.

Command format: # command number 730# Sampling interval # Pieces of uploads # User password ##

For example: #730#20#4#0000##

Note: The parameter "20" indicates getting one point every 20s; after getting points accumulatively for 4 times, upload one piece of positioning information with the upload interval as 20*4=80s. The user may change this parameter as the case may be.

7. Function of Changing Password

Send the SMS "#770# User new password # User old password ##" by mobile phone to the terminal number, after successful sending, the mobile phone with such setup will receive one piece of config ok response information, as shown in the following figure:

8. Low-Voltage Alarming Function

If the terminal of the ward has a very low power and needs to be powered off, the terminal of the ward will automatically upload one piece of low-voltage alarming command to the monitoring center number.

9. Set APN Command

SMS command: #802#APN letters or digits, 4-20 bits # Log user name letters or digits 4-20 bits in # Log password letter or digits 4-20 bits in # terminal password 4 bits ##

Send this command to the terminal; after executing this command, the terminal will automatically restart and connect to GPRS with APN set.

If the APN no user name, the example: 1: #802#cmnet###0000###

If the APN has user name and password: 2: #802#CCDLEN#QIUXIA.21#RX0000#0000##

After this command is executed, APN will be CCDLEN; the login user name is QIUXIA.21 and login password is RX0000.

Note: The default APN of this product is CMNET.

10. Electronic Fence Function

(1)GPS Fence Function

The guardian may log into the system, click the custom deviation setup in the user system manager, enter the deviation setup interface, choose the longitude and latitude of the center point to be set as fence. Click the mouse in the Google map, then reading page will display the electronic

fence with longitude and latitude set. See the figure below:

Set fence format: # command number (751) # fence radius # sampling interval # longitude # latitude # user password ##.

For example: #751#500#5#22.5442N#113.91E#0000##

After the setup is successful, the setting mobile phone will receive a piece of config ok command. Then, when the ward leaves this area, the terminal will send the alarming information of being out of the fence to the center number.

(3) Fence Reading Function

Send commands to the terminal: # command number (752) # user password 4 digits ##; after the command is set successfully, the terminal will read the data of the module fence working status and return message to the sending mobile phone, or PASSWORD ER if the password is wrong.

For example: #752#0000##

Return: #open:1#lat:11456.209400#lng:2233.470100#distance:500#time:5#status:2

Where, open: 1 indicates fence open; Open: 0 indicates fence closed;

lat:11456.209400, latitude;

lng: 2233.470100; longitude;

distance: 500; fence radius;

time: 5 sampling interval;

status: 2 , terminal has obtained valid satellite data, fence works normally;

status: 1; fence open, but there are no valid satellite data have been received;

status: 0, no electronic fence is set.

(4) Function of Canceling Fence

Command name: # command number (760) # user password 4-digits ##

Example: #760#0000##

After the terminal receiving this command, all fence settings will be cancelled.
Advice； Do not set GSM fence and GPS fence at the same time.

11. Auxiliary Functions:

(1)#901## Read users setting parameter
(2)#902## Read GPRS parameter
(3)#903## Restart the tracker
(4)#920#0000## Change the language from English to Chinese

Command list

Function	Command	Note
Point to Point Function1 （ Single Position ）	666+Password	
Set Center Number	#710#135xxxxxxxx#0000##	After you send this command, 135xxxxxxxx will be the Center Number, the unit will send message to this number such as Alarm with Lower Power or SOS Alarm
Set IP and port	Set IP and Port： Comamnd: #803#IP#port#password## E.g #803#210.211.31.217#6789#0000## Or set the IP and Port by a domain name #803#http://www.xxx.com#2335#0000##	
Set time interval	Set the upload interval Time 730 Command #730#time#piece#0000## e.g. #730#30#1#0000##	
Monitor Function	Send : 555+Password Eg: 5550000	After the unit receive this command, the unit will call the sender
Geo Fence Function	Send 751Command： # command number (751) # fence radius # sampling interval # longitude # latitude # user password ##. #751#500#5#2234.5848N#11354.028#0000##	This command is that get the single latitude and longitude to set the geo fence, put 2234.5848N,11354.028E be the origin point, and the radius is 500meters for the area .
Cancel or Check the Geo Fence Function	（1）#760#0000# （2）#752#0000#	（1）This command can cancel the geo fence function that you already set it ago. （2）This command can

		check the information of geo fence
Change the password of Unit	#770#1111#0000##	Change 0000(initial password) to 1111 (new password)
Get google link	SMS command: 988+password E.G. 9880000	
Other Function	(1)#901## Read users setting parameter (2)#902## Read GPRS parameter (3)#903## Restart the tracker (4)#920#0000## Change the language from English to Chinese	

Notices:

1. This device is of non-waterproof design.
2. This device must work with the cooperation of GSM/GPRS network.
3. Make sure that the SIM card has sufficient balance in order to avoid inconvenience in use.
4. This device will not be able to work in case of power-off and out of the service area, even if you are a registered user.
5. This device supports the dual positioning mode of GPS and GSM/GPRS.
6. Please use this device in a legal area, any illegal consequence will be borne by the user.